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Abstract of the Disclosure

In a semiconductor device including a first conductive layer, the first conductive layer is treated with a nitrogen/hydrogen plasma before an additional layer is deposited thereover. The treatment stuffs the surface with nitrogen, thereby preventing oxygen from being adsorbed onto the surface of the first conductive layer. In one embodiment, a second conductive layer is deposited onto the first conductive layer, and the plasma treatment lessens if not eliminates an oxide formed between the two layers as a result of subsequent thermal treatments. In another embodiment, a dielectric layer is deposited onto the first conductive layer, and the plasma treatment lessens if not eliminates the ability of the first conductive layer to incorporate oxygen from the dielectric.

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